

CLAIMS

We claim:

1. Process for assembly of aluminium alloy plates comprising fluxless brazing under controlled atmosphere at a temperature of between 580°C and 620°C, rapid cooling and possibly aging at a temperature of between 80°C and 250°C, and in which at least one of the plates is composed of a core alloy with composition (% by weight):

Si 0.3-1.0; Fe<1.0; Cu 0.3-1.0; Mn 0.3-2.0; Mg 0.3-3.0; Zn<6.0; Ti<0.1; Zr<0.3; Cr<0.3; Ni<2.0; Co<2.0; Bi<0.5; Y<0.5, other elements <0.05 each and 0.15 total, remainder aluminium,

coated on at least one face with an aluminium brazing alloy containing 4% to 15% of silicon and 0.01% to 0.5% of at least one of the elements Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal.

2. Process according to claim 1, characterised in that the copper content of the core alloy is between 0.35% and 1%.

3. Process according to either claim 1 or 2, characterised in that the manganese content of the core alloy is between 0.3% and 0.7%.

4. Process according to one of claims 1 to 3, characterised in that the manganese content of the core alloy is between 0.35% and 0.7%.

5. Process according to one of claims 1 to 4, characterised in that the zinc content of the core alloy is less than 0.2%.

6. Process according to one of claims 1 to 5, characterised in that the bismuth content of the core alloy is between 0.05% and 0.5%.

7. Process according to one of claims 1 to 6, characterised in that the yttrium content of the core alloy is between 0.01% and 0.5%.

8. Process according to one of claims 1 to 7, characterised in that composition of the core alloy is:

Si 0.3-1.0; Fe<0.5; Cu 0.35-1.0; Mn 0.3-0.7; Mg 0.35-0.7; Zn<0.2; Ti<0.1; Zr<0.3; Cr<0.3; Ni<1.0; Co<1.0; Bi<0.5; Y<0.5; other elements <0.05 each and 0.15 total, remainder aluminium.

9. Process according to one of claims 1 to 8, characterised in that the brazing alloy is cladded onto the core alloy by co-rolling.

10. Process according to one of claims 1 to 8, characterised in that the brazing alloy coating is composed of particles, possibly coated with a resin layer.

11. Process according to one of claims 1 to 10, characterised in that it is used for manufacturing of heat exchangers and that aging is conducted in hot parts during operation of the exchangers.